

8" Slow Speed Grinder

(Model 23-725)



PART NO. 900804 - 06-10-05
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visit our website at: www.deltamachinery.com.

For Parts, Service, Warranty or other Assistance,
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IMPORTANT SAFETY INSTRUCTIONS

⚠ WARNING Read and understand all warnings and operating instructions before using any tool or equipment. When using tools or equipment, basic safety precautions should always be followed to reduce the risk of personal injury. Improper operation, maintenance or modification of tools or equipment could result in serious injury and property damage. There are certain applications for which tools and equipment are designed. Delta Machinery strongly recommends that this product NOT be modified and/or used for any application other than for which it was designed.

If you have any questions relative to its application DO NOT use the product until you have written Delta Machinery and we have advised you.

Online contact form at www.deltamachinery.com

Postal Mail: Technical Service Manager
Delta Machinery
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Information regarding the safe and proper operation of this tool is available from the following sources:

Power Tool Institute
1300 Sumner Avenue, Cleveland, OH 44115-2851
www.powertoolinstitute.org

National Safety Council
1121 Spring Lake Drive, Itasca, IL 60143-3201

American National Standards Institute, 25 West 43rd Street, 4 floor, New York, NY 10036 www.ansi.org
ANSI O1.1 Safety Requirements for Woodworking Machines, and

the U.S. Department of Labor regulations www.osha.gov

SAVE THESE INSTRUCTIONS!

SAFETY GUIDELINES - DEFINITIONS

It is important for you to read and understand this manual. The information it contains relates to protecting YOUR SAFETY and PREVENTING PROBLEMS. The symbols below are used to help you recognize this information.



⚠ DANGER	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
⚠ WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
CAUTION	Used without the safety alert symbol indicates potentially hazardous situation which, if not avoided, may result in property damage.

CALIFORNIA PROPOSITION 65

⚠ WARNING **SOME DUST CREATED BY POWER SANDING, SAWING, GRINDING, DRILLING, AND OTHER CONSTRUCTION ACTIVITIES** contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, always wear **NIOSH/OSHA** approved, properly fitting face mask or respirator when using such tools.

GENERAL SAFETY RULES



⚠ WARNING READ AND UNDERSTAND ALL WARNINGS AND OPERATING INSTRUCTIONS BEFORE USING THIS EQUIPMENT. Failure to follow all instructions listed below, may result in electric shock, fire, and/or serious personal injury or property damage.

IMPORTANT SAFETY INSTRUCTIONS

1. **FOR YOUR OWN SAFETY, READ THE INSTRUCTION MANUAL BEFORE OPERATING THE MACHINE.** Learning the machine's application, limitations, and specific hazards will greatly minimize the possibility of accidents and injury.
2. **WEAR EYE AND HEARING PROTECTION. ALWAYS USE SAFETY GLASSES.** Everyday eyeglasses are NOT safety glasses. USE CERTIFIED SAFETY EQUIPMENT. Eye protection equipment should comply with ANSI Z87.1 standards. Hearing equipment should comply with ANSI S3.19 standards.
3. **WEAR PROPER APPAREL.** Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
4. **DO NOT USE THE MACHINE IN A DANGEROUS ENVIRONMENT.** The use of power tools in damp or wet locations or in rain can cause shock or electrocution. Keep your work area well-lit to prevent tripping or placing arms, hands, and fingers in danger.
5. **MAINTAIN ALL TOOLS AND MACHINES IN PEAK CONDITION.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories. Poorly maintained tools and machines can further damage the tool or machine and/or cause injury.
6. **CHECK FOR DAMAGED PARTS.** Before using the machine, check for any damaged parts. Check for alignment of moving parts, binding of moving parts, breakage of parts, and any other conditions that may affect its operation. A guard or any other part that is damaged **should be properly repaired or replaced**. Damaged parts can cause further damage to the machine and/or injury.
7. **KEEP THE WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
8. **KEEP CHILDREN AND VISITORS AWAY.** Your shop is a potentially dangerous environment. Children and visitors can be injured.
9. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure that the switch is in the "OFF" position before plugging in the power cord. In the event of a power failure, move the switch to the "OFF" position. An accidental start-up can cause injury.
10. **USE THE GUARDS.** Check to see that all guards are in place, secured, and working correctly to reduce the risk of injury.
11. **REMOVE ADJUSTING KEYS AND WRENCHES BEFORE STARTING THE MACHINE.** Tools, scrap pieces, and other debris can be thrown at high speed, causing injury.
12. **USE THE RIGHT MACHINE.** Don't force a machine or an attachment to do a job for which it was not designed. Damage to the machine and/or injury may result.
13. **USE RECOMMENDED ACCESSORIES.** The use of accessories and attachments not recommended by Delta may cause damage to the machine or injury to the user.
14. **USE THE PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. See the Extension Cord Chart for the correct size depending on the cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.
15. **SECURE THE WORKPIECE.** Use clamps or a vise to hold the workpiece when practical. Loss of control of a workpiece can cause injury.
16. **FEED THE WORKPIECE AGAINST THE DIRECTION OF THE ROTATION OF THE BLADE, CUTTER, OR ABRASIVE SURFACE.** Feeding it from the other direction will cause the workpiece to be thrown out at high speed.
17. **DON'T FORCE THE WORKPIECE ON THE MACHINE.** Damage to the machine and/or injury may result.
18. **DON'T OVERREACH.** Loss of balance can make you fall into a working machine, causing injury.
19. **NEVER STAND ON THE MACHINE.** Injury could occur if the tool tips, or if you accidentally contact the cutting tool.
20. **NEVER LEAVE THE MACHINE RUNNING UNATTENDED. TURN THE POWER OFF.** Don't leave the machine until it comes to a complete stop. A child or visitor could be injured.
21. **TURN THE MACHINE "OFF", AND DISCONNECT THE MACHINE FROM THE POWER SOURCE** before installing or removing accessories, before adjusting or changing set-ups, or when making repairs. An accidental start-up can cause injury.
22. **MAKE YOUR WORKSHOP CHILDPROOF WITH PADLOCKS, MASTER SWITCHES, OR BY REMOVING STARTER KEYS.** The accidental start-up of a machine by a child or visitor could cause injury.
23. **STAY ALERT, WATCH WHAT YOU ARE DOING, AND USE COMMON SENSE. DO NOT USE THE MACHINE WHEN YOU ARE TIRED OR UNDER THE INFLUENCE OF DRUGS, ALCOHOL, OR MEDICATION.** A moment of inattention while operating power tools may result in injury.
24. **⚠ WARNING** USE OF THIS TOOL CAN GENERATE AND DISBURSE DUST OR OTHER AIRBORNE PARTICLES, INCLUDING WOOD DUST, CRYSTALLINE SILICA DUST AND ASBESTOS DUST. Direct particles away from face and body. Always operate tool in well ventilated area and provide for proper dust removal. Use dust collection system wherever possible. Exposure to the dust may cause serious and permanent respiratory or other injury, including silicosis (a serious lung disease), cancer, and death. Avoid breathing the dust, and avoid prolonged contact with dust. Allowing dust to get into your mouth or eyes, or lay on your skin may promote absorption of harmful material. Always use properly fitting NIOSH/OSHA approved respiratory protection appropriate for the dust exposure, and wash exposed areas with soap and water.

ADDITIONAL SPECIFIC SAFETY RULES

▲ WARNING

FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY.

1. **DO NOT OPERATE THIS MACHINE** until it is completely assembled and installed according to the instructions. A machine incorrectly assembled can cause serious injury.
2. **OBTAIN ADVICE** from your supervisor, instructor, or another qualified person if you are not thoroughly familiar with the operation of this machine. Knowledge is safety.
3. **FOLLOW ALL WIRING CODES** and recommended electrical connections to prevent shock or electrocution.
4. **ALWAYS USE THE PROVIDED BLOTTER AND WHEEL FLANGES** to mount the grinding wheels on the grinder shaft to prevent wheel damage or accidental separation. Separation can result in fragments flying off the wheel at high speeds.
5. **USE ONLY WHEELS** suitable for the speed of the machine. Unsuitable grinding wheels can come apart, throwing fragments out at high speeds.
6. **USE ONLY WHEELS** that have a bore exactly equal to the arbors of the machine. Never attempt to machine an undersized wheel to fit an arbor. Unsuitable grinding wheels can come apart, throwing fragments out at high speeds.
7. **DO NOT OVERTIGHTEN WHEEL NUT.**
8. **DO NOT USE A WHEEL THAT VIBRATES.** Dress the grinding wheel, replace it, or replace the bearings of the shaft. Unsuitable grinding wheels can come apart, throwing fragments at high speeds.
9. **INSPECT WHEELS** before starting the machine for cracks or fragments. **REPLACE DAMAGED WHEELS** immediately. Parts of the wheel can be thrown at high speeds causing serious injury.
10. **ADJUST EYE SHIELDS** close to the grinding wheel, and re-adjust as the wheel wears down. Flying sparks are dangerous and can cause fires or explosions.
11. **ALWAYS MAKE SURE** the eye shields are in place, properly adjusted, and secured.
12. **ADJUST TOOL RESTS** close to the grinding wheel (1/8" separation or less). Tighten the tool rest securely to prevent shifting positions, and re-adjust as the wheel wears down. The workpiece can be drawn into the wheel, causing damage to the workpiece and/or serious injury.
13. **STAND TO ONE SIDE** before turning the machine "ON". Loose fragments or wheel parts could fly from the wheel at high speeds.
14. **NEVER GRIND ON A COLD WHEEL.** Run the grinder for one full minute before applying the workpiece. A cold wheel has a tendency to chip. Those fragments could fly from the wheel at high speeds.
15. **NEVER START THE MACHINE** with the workpiece against the grinding wheel. The workpiece can be drawn into the wheel, causing damage to the machine and/or serious injury.
16. **CLEAN THE MACHINE** thoroughly when processing different types of workpieces (wood, steel, or aluminum). Combining wood and metal dust can create an explosion or fire hazard. **DO NOT GRIND OR POLISH MAGNESIUM.** Fire will result.
17. **NEVER GRIND NEAR FLAMMABLE GAS OR LIQUIDS.** Sparks can create a fire or an explosion.
18. **AVOID AWKWARD OPERATIONS AND HAND POSITIONS.** A sudden slip could cause a hand to move into the grinding wheel.
19. **KEEP ARMS, HANDS, AND FINGERS** away from the wheel. The abrasive surfaces can cause serious injury.
20. **HOLD THE WORKPIECE FIRMLY** against the tool rest. Loss of control of the workpiece can cause serious injury.
21. **DRESS THE WHEEL** on the face only. Dressing the side of the wheel could cause it to become too thin for safe use.
22. **GRIND A WORKPIECE** using the face of the grinding wheel only. Loss of control of the workpiece can cause serious injury.
23. **NEVER APPLY COOLANT** directly to the grinding wheel. Coolant can weaken the bonding strength of the grinding wheel and cause it to fail. Dip the workpiece in water to cool it.
24. **DO NOT TOUCH** the ground portion of a workpiece until it has cooled sufficiently. Grinding creates heat.
25. **PROPERLY SUPPORT LONG OR WIDE WORKPIECES.** Loss of control of the workpiece can cause serious injury.
26. **NEVER PERFORM LAYOUT, ASSEMBLY,** or set-up work on the table/work area when the machine is running. A sudden slip could cause a hand to move into the wheel. Severe injury can result.
27. **TURN THE MACHINE "OFF",** disconnect the machine from the power source, and clean the table/work area before leaving the machine. **LOCK THE SWITCH IN THE "OFF" POSITION** to prevent unauthorized use. Someone else might accidentally start the machine and cause serious injury to themselves.
28. **ADDITIONAL INFORMATION** regarding the safe and proper operation of power tools (i.e. a safety video) is available from the Power Tool Institute, 1300 Sumner Avenue, Cleveland, OH 44115-2851 (www.powertoolinstitute.com). Information is also available from the National Safety Council, 1121 Spring Lake Drive, Itasca, IL 60143-3201. Please refer to the American National Standards Institute ANSI 01.1 Safety Requirements for Woodworking Machines and the U.S. Department of Labor OSHA 1910.213 Regulations.

SAVE THESE INSTRUCTIONS.

Refer to them often and use them to instruct others.

POWER CONNECTIONS

A separate electrical circuit should be used for your machines. This circuit should not be less than #12 wire and should be protected with a 20 Amp time lag fuse. If an extension cord is used, use only 3-wire extension cords which have 3-prong grounding type plugs and matching receptacle which will accept the machine's plug. Before connecting the machine to the power line, make sure the switch (s) is in the "OFF" position and be sure that the electric current is of the same characteristics as indicated on the machine. All line connections should make good contact. Running on low voltage will damage the machine.

⚠ DANGER DO NOT EXPOSE THE MACHINE TO RAIN OR OPERATE THE MACHINE IN DAMP LOCATIONS.

MOTOR SPECIFICATIONS

Your machine is wired for 120 volts, 60 HZ alternating current. Before connecting the machine to the power source, make sure the switch is in the "OFF" position.

GROUNDING INSTRUCTIONS

⚠ DANGER THIS MACHINE MUST BE GROUNDED WHILE IN USE TO PROTECT THE OPERATOR FROM ELECTRIC SHOCK.

1. All grounded, cord-connected machines:

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This machine is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the machine is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding type plugs and matching 3-conductor receptacles that accept the machine's plug, as shown in Fig. A.

Repair or replace damaged or worn cord immediately.

2. Grounded, cord-connected machines intended for use on a supply circuit having a nominal rating less than 150 volts:

If the machine is intended for use on a circuit that has an outlet that looks like the one illustrated in Fig. A, the machine will have a grounding plug that looks like the plug illustrated in Fig. A. A temporary adapter, which looks like the adapter illustrated in Fig. B, may be used to connect this plug to a matching 2-conductor receptacle as shown in Fig. B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green-colored rigid ear, lug, and the like, extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box. Whenever the adapter is used, it must be held in place with a metal screw.

NOTE: In Canada, the use of a temporary adapter is not permitted by the Canadian Electric Code.

⚠ DANGER IN ALL CASES, MAKE CERTAIN THAT THE RECEPTACLE IN QUESTION IS PROPERLY GROUNDED. IF YOU ARE NOT SURE, HAVE A QUALIFIED ELECTRICIAN CHECK THE RECEPTACLE.

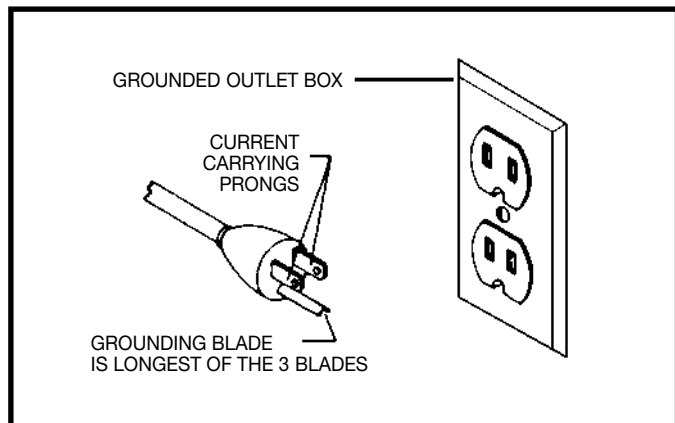


Fig. A

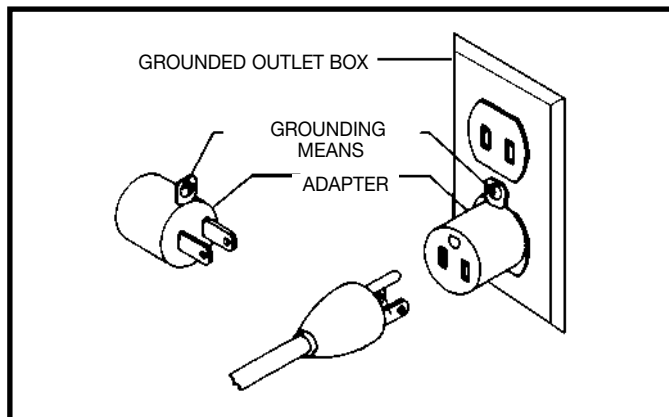


Fig. B

EXTENSION CORDS

⚠ WARNING Use proper extension cords. Make sure your extension cord is in good condition and is a 3-wire extension cord which has a 3-prong grounding type plug and matching receptacle which will accept the machine's plug. When using an extension cord, be sure to use one heavy enough to carry the current of the machine. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. Fig. D-1 or D-2, shows the correct gauge to use depending on the cord length. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

MINIMUM GAUGE EXTENSION CORD			
RECOMMENDED SIZES FOR USE WITH STATIONARY ELECTRIC MACHINES			
Ampere Rating	Volts	Total Length of Cord in Feet	Gauge of Extension Cord
0-6	120	up to 25	18 AWG
0-6	120	25-50	16 AWG
0-6	120	50-100	16 AWG
0-6	120	100-150	14 AWG
6-10	120	up to 25	18 AWG
6-10	120	25-50	16 AWG
6-10	120	50-100	14 AWG
6-10	120	100-150	12 AWG
10-12	120	up to 25	16 AWG
10-12	120	25-50	16 AWG
10-12	120	50-100	14 AWG
10-12	120	100-150	12 AWG
12-16	120	up to 25	14 AWG
12-16	120	25-50	12 AWG
12-16	120	GREATER THAN 50 FEET NOT RECOMMENDED	

Fig. D-1

FUNCTIONAL DESCRIPTION

FOREWORD

The Delta Industrial 23-725 8" Slow-Speed Grinder includes a 3/4 HP motor wired at 120 volts, a flexible lamp, spark guards, eyeshields, tool rests, wheel dresser, two wheels, a wrench and a water tray. Slow speed (1725 RPM) reduces heat generated by grinding.

NOTICE: The photo on the manual cover illustrates the current production model. All other illustrations contained in the manual are representative only and may not depict the actual labeling or accessories included. These are intended to illustrate technique only.

CARTON CONTENTS

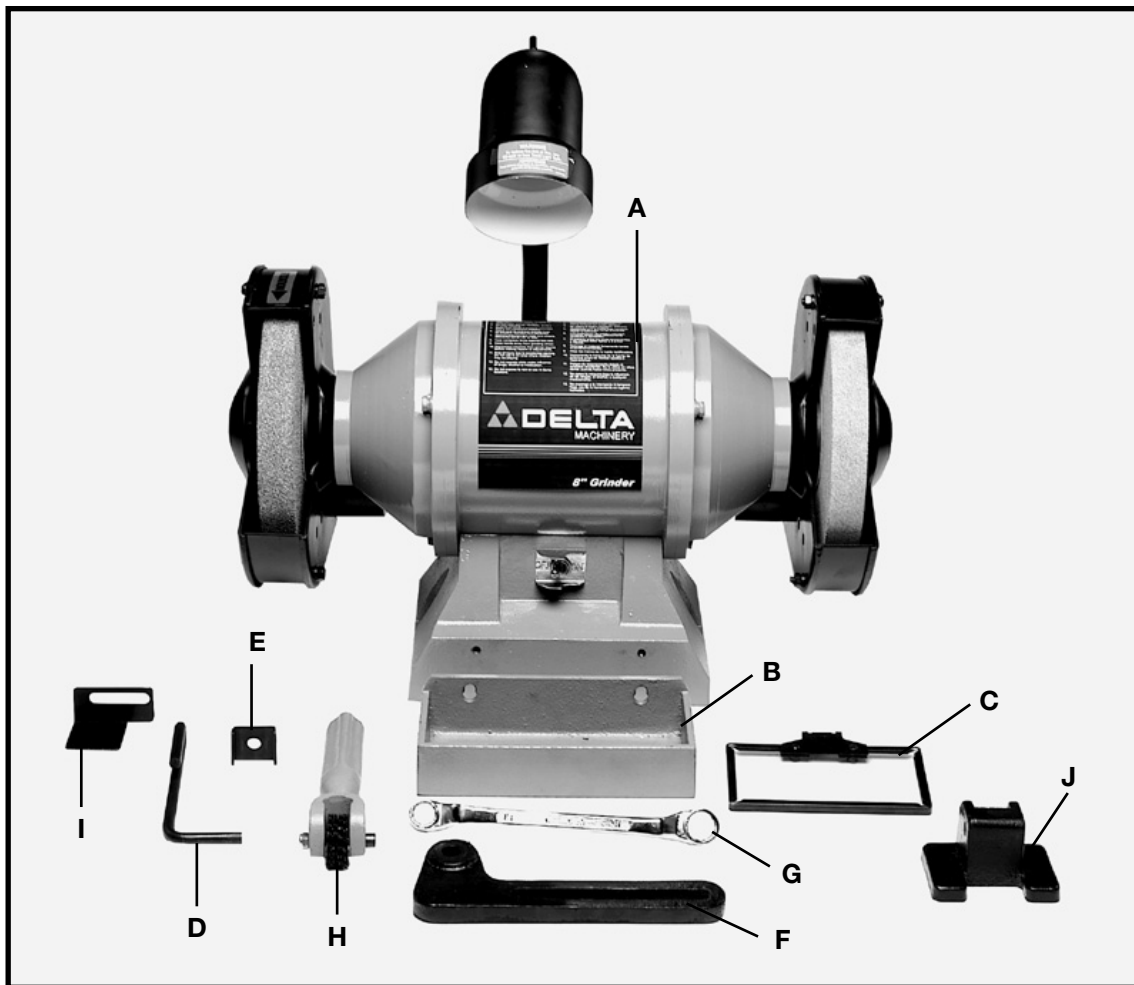


Fig. 1

- A** Grinder and Lamp (1)
- B** Water Tray (1)
- C** Eye Shield (2)
- D** Eye Shield Rod (2)
- E** Eye Shield Rod Bracket (2)
- F** Tool Rest Arm (2)
- G** Wrench (1)
- H** Wheel Dresser (1)
- I** Spark Guard (2)
- J** Tool Rest (2)

HARDWARE ILLUSTRATION

Fig. 2 illustrates the hardware components of the grinder. **ACTUAL SIZE**

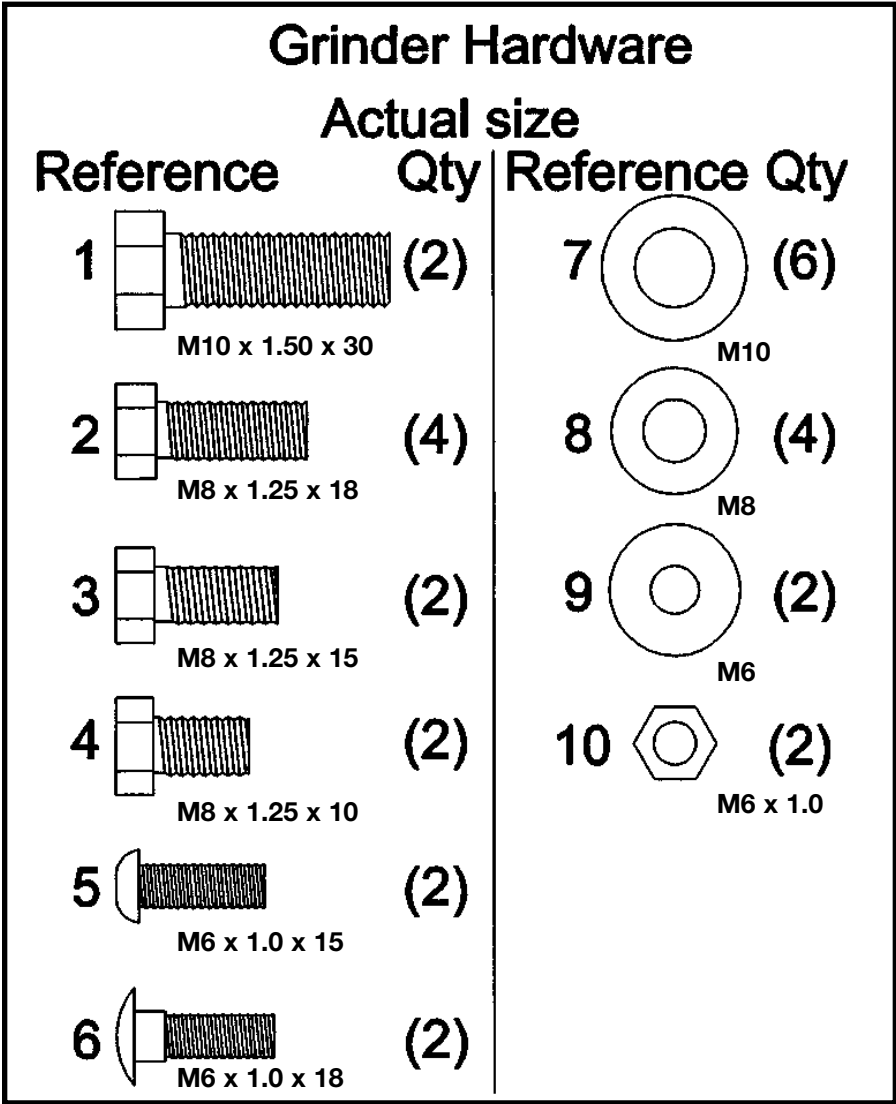


Fig. 2

UNPACKING AND CLEANING

Carefully unpack the machine and all loose items from the shipping container(s). Remove the protective coating from all unpainted surfaces. This coating may be removed with a soft cloth moistened with kerosene (do not use acetone, gasoline or lacquer thinner for this purpose). After cleaning, cover the unpainted surfaces with a good quality household floor paste wax.

ASSEMBLY

ASSEMBLY TOOLS REQUIRED

- * Wrench (supplied)
- * 10mm, 13mm, 17mm socket or open end wrenches (not supplied)

ASSEMBLY TIME ESTIMATE

Assembly for this machine takes approximately 1 hour.

⚠ WARNING FOR YOUR OWN SAFETY, DO NOT CONNECT THE TOOL TO THE POWER SOURCE UNTIL THE MACHINE IS COMPLETELY ASSEMBLED AND YOU HAVE READ AND UNDERSTAND THE ENTIRE INSTRUCTION MANUAL.

ASSEMBLING TOOL RESTS

⚠ CAUTION DISCONNECT MACHINE FROM POWER SOURCE.

1. The tool rest arms (F) Fig. 3, are universal and can be attached to either side of the grinder. Assemble adjustable tool rest (J) Fig. 3, to left side of tool rest arm (F) Fig. 3, as shown, and fasten with one bolt (1) Fig. 2, and one washer (7) Fig. 2, as shown. Assemble the remaining tool rest to the right side of the other tool rest arm in the same manner. Do not completely tighten hardware at this time.

2. To identify the left & right tool rests place them, as they would be assembled on the tool Fig. 4. The left tool rest will have a threaded hole on the right side of the tool rest, and the right tool rest will have a threaded hole on the left side of the tool rest.

3. Attach left tool rest assembly Fig. 4, to the inside of left wheel guard, and fasten with two bolts (2) Fig. 2, and two washers (7) Fig. 2 as shown.

4. Attach right tool rest assembly to the inside of right wheel guard and fasten with two bolts (2) Fig. 2 and two washers (7) Fig. 2 in the same manner.

5. Each tool rest assembly Fig. 4, is adjustable so it can be positioned slightly below the centerline of the wheel and as close to the grinding wheel as possible, giving maximum support to the piece that is being ground. **IMPORTANT:** A distance of 1/8-inch or less between the grinding wheel and the inside edge of the tool rest should always be maintained.

6. When the tool rest is positioned correctly, tighten the hardware. As the grinding wheel wears down to a smaller diameter, re-adjust the tool rest closer to the wheel. Freehand grinding without the use of a tool rest should always be done on the lower quarter of the wheel.

ASSEMBLING SPARK GUARDS

⚠ CAUTION DISCONNECT MACHINE FROM POWER SOURCE.

The spark guard (I) Fig. 5, is to be mounted to the side of each wheel guard, using one bolt (4) Fig. 2, and one washer (8) Fig. 2 as shown. The spark guard (I) should be adjusted as close as possible to the grinding wheel so that sparks never strike the operator's hand. As the wheels wear down, the spark guard (I) should be adjusted accordingly.

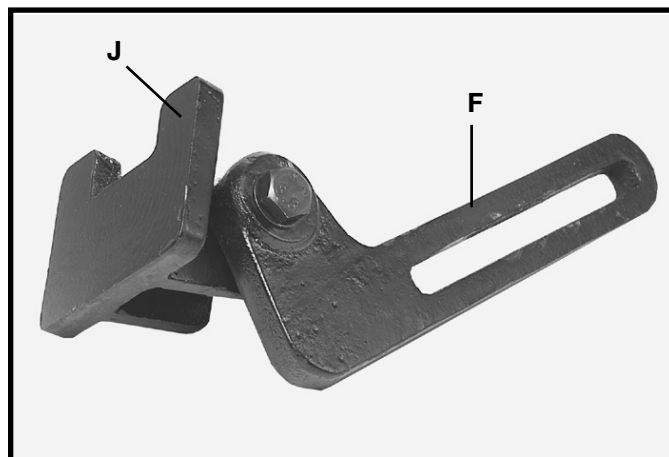


Fig. 3

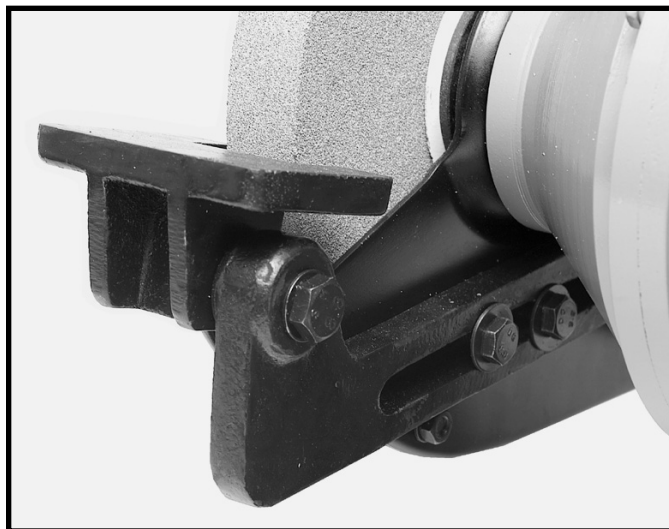


Fig. 4

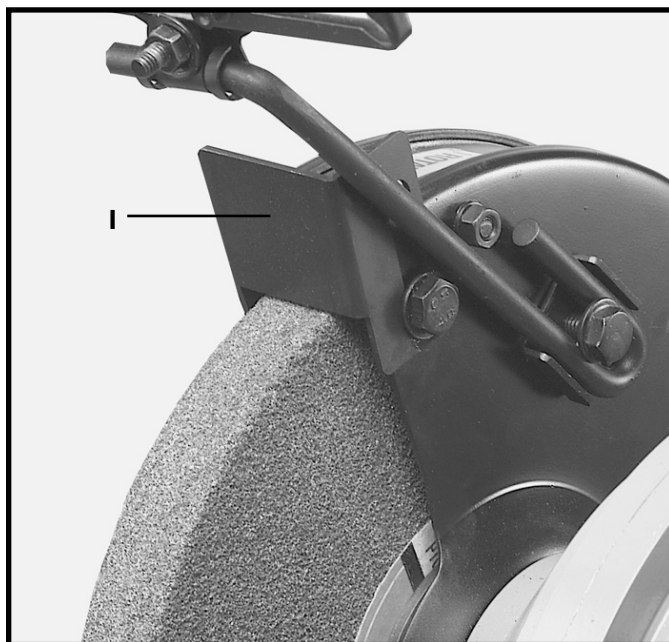


Fig. 5

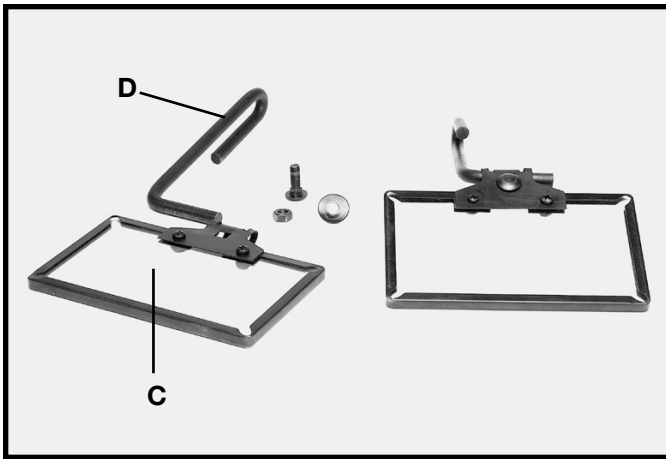


Fig. 6

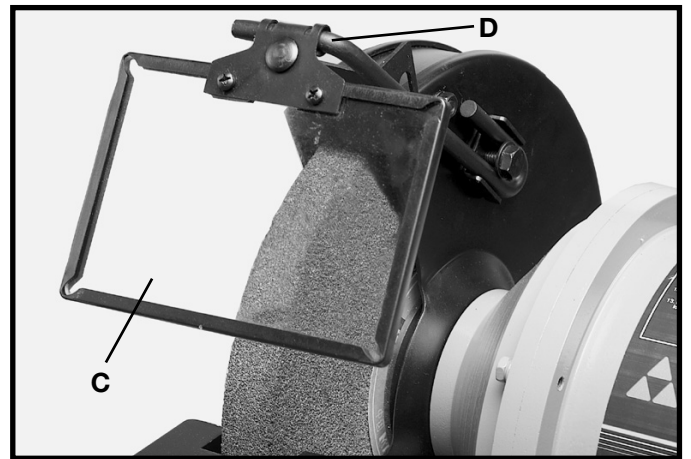


Fig. 7

ASSEMBLING EYE SHIELDS

⚠ CAUTION DISCONNECT MACHINE FROM POWER SOURCE.

Your grinder is supplied with two eye shields for operator protection. **NOTE: ALWAYS WEAR EYE PROTECTION.** To assemble the eye shields, proceed as follows:

1. Assemble long end of eye shield mounting rod (D) Fig. 1, to the side of each wheel guard using the eye shield rod bracket (E) Fig. 1, and screw (3) Fig. 2, and washer (8) Fig. 2. **Note:** The mounting rod should be positioned so that the "L" shaped end of the mounting rod is pointing outward, away from the machine. Fig. 7.
2. Insert the "L" shaped end of mounting rod (D) Fig. 7, into hole of frame (C) Fig. 7 and fasten in place with screw (6) Fig. 2, one washer (9) Fig. 2, and one nut (10) Fig. 2. The eye shield (C) is fully adjustable so it can be put in any position by moving the shield (C) or loosening screw (3) Fig. 2 and repositioning rod (D).
3. Assemble the remaining eye shield to other wheel guard in the same manner.

ASSEMBLING WATER TRAY

⚠ CAUTION DISCONNECT MACHINE FROM POWER SOURCE.

To assemble the water tray (B) Fig. 8, align holes in the water tray, with the holes in the front of the grinder, insert two screws (5) Fig. 2, and tighten securely.

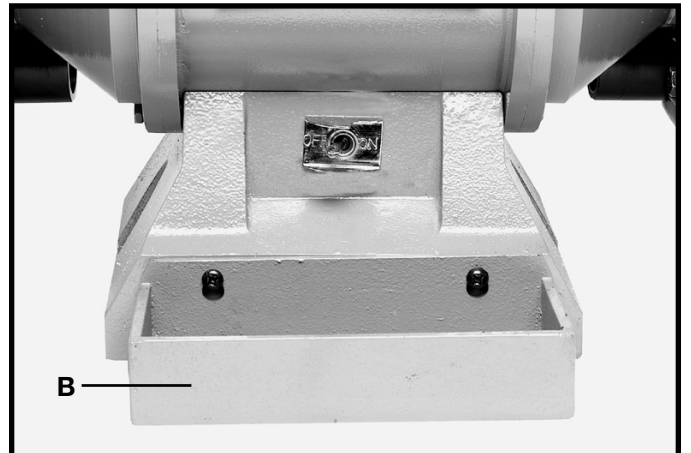


Fig. 8

FASTENING GRINDER TO SUPPORTING SURFACE

⚠ WARNING IF DURING OPERATION THERE IS ANY TENDENCY FOR THE GRINDER TO TIP OVER, SLIDE OR "WALK," THE GRINDER MUST BE SECURED TO THE SUPPORTING SURFACE USING FASTENERS (NOT SUPPLIED) THROUGH THE TWO HOLES (A) Fig. 9, IN THE GRINDER BASE.



Fig. 9

FLEXIBLE LAMP

The flexible lamp operates independently of the grinder. To turn the lamp on and off, rotate switch (A) Fig. 17.

⚠ WARNING To reduce the risk of fire, use 40 watt or less, 120 volt, reflector track type light bulb (not supplied). A standard household light bulb should not be used. The reflector track type light bulb should not extend below the lampshade.



Fig. 17

OPERATION

OPERATIONAL CONTROLS AND ADJUSTMENTS

STARTING AND STOPPING GRINDER

1. The on/off switch (A) Fig. 18 is located on the front of the grinder. To turn the machine “ON”, move the switch up to the “ON” position.
2. To turn the machine “OFF”, move the switch (A) down to the “OFF” position.

⚠ WARNING MAKE SURE THAT THE SWITCH IS IN THE “OFF” POSITION BEFORE PLUGGING IN THE POWER CORD. IN THE EVENT OF A POWER FAILURE, MOVE THE SWITCH TO THE “OFF” POSITION. AN ACCIDENTAL START-UP CAN CAUSE INJURY.

LOCKING SWITCH IN “OFF” POSITION

IMPORTANT: When the machine is not in use, the switch should be locked in the “OFF” position to prevent unauthorized use, using a padlock with a 3/16" diameter shackle inserted through the holes at (B) Fig. 18.

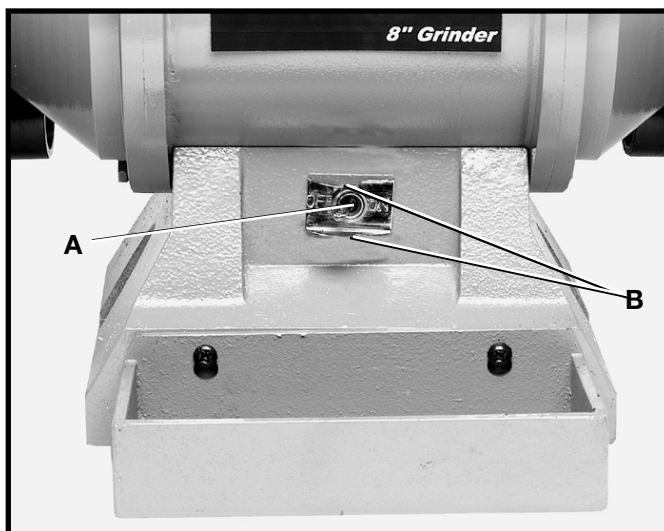


Fig. 18

GRINDING WHEELS

⚠ WARNING THE USE OF ACCESSORIES AND ATTACHMENTS NOT RECOMMENDED BY DELTA MAY RESULT IN RISK OF INJURIES.

Grinding wheels used with **Model 23-725** grinders should be rated for 1800 RPM or higher and be 8" in diameter with a 5/8" or 1" arbor hole.

The arbor bushing should be saved, for future use, if the replacement wheel does not use the bushing.

For best grinding results, and to maintain good balance, always keep the wheels properly dressed. Do not force the work against a cold wheel. The grinding wheel should always be run at idle speed for one full minute before applying work. It is recommended that only balanced wheels be used with your grinder. The use of balanced wheels adds years to the life of the bearings on the grinder and by eliminating the most common source of vibration, more accurate work is accomplished.

DRESSING A GRINDING WHEEL

When dressing a grinding wheel, use a suitable silicone carbide stick type dresser or the wheel dresser wrench provided with the grinder, as shown in Fig. 19. Bring the dresser forward on the tool rest until it just touches the high point on the face of the wheel and dress the wheel by moving the dresser back and forth. Repeat this operation until the face of the grinding wheel is clean and the corners of the wheels are square.



Fig. 19

CHANGING GRINDING WHEELS

⚠ CAUTION DISCONNECT MACHINE FROM POWER SOURCE BEFORE CHANGING GRINDING WHEELS.

1. When changing wheels, remove the three screws (A) Fig. 20, attaching the side covers to the grinder and remove the side cover (B).

2. To prevent shaft rotation, place a wedge between the grinding wheel (C) Fig. 21, and the tool rest (D). **NOTE:** Facing the front of the grinder: to replace the wheel on the left side of the grinder, turn the arbor nut (E) Fig. 21, clockwise to loosen; counterclockwise to tighten the arbor nut.

3. To replace the grinding wheel on the right, turn the arbor nut (E), counterclockwise to loosen; clockwise to tighten the arbor nut.

4. The arbor bushing should be saved, for future use, if the replacement wheel does not use the bushing.

⚠ WARNING DO NOT OVERTIGHTEN WHEEL NUTS WHEN INSTALLING GRINDING WHEELS. TIGHTEN WHEEL NUT ENOUGH TO DRIVE THE WHEEL AND PREVENT SLIPPAGE, (APPROXIMATELY 5-7 ft/lbs).

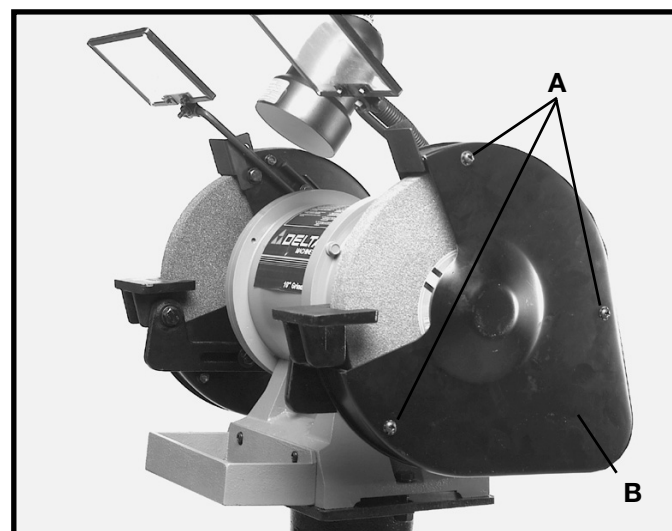


Fig. 20

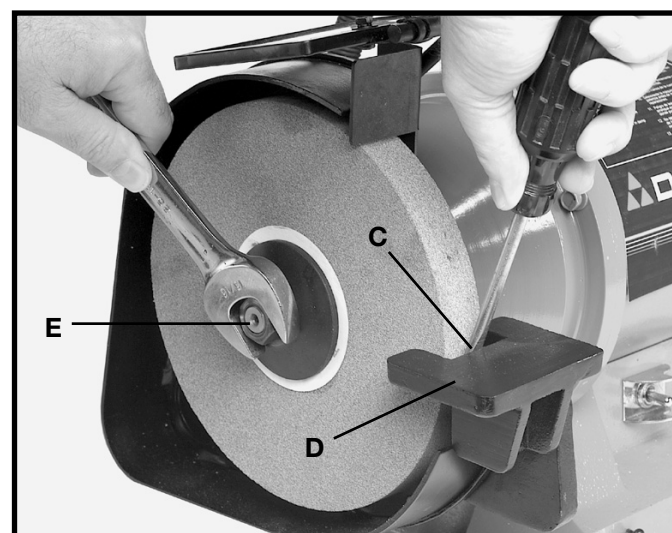


Fig. 21

DUST PORT

There is one dust port located on the rear of each grinding wheel cover; this dust port enables the user to attach a dust collection system to the grinder. Fig. 22.

⚠ WARNING WHEN USING A DUST COLLECTION SYSTEM WITH THIS METAL GRINDING TOOL, BE SURE THE DUST COLLECTOR IS DESIGNED TO ACCEPT HOT METAL SHAVINGS.

MACHINE USE

IMPORTANT: KEEP SPARK GUARDS AND EYE SHIELDS IN PLACE AT ALL TIMES.

Figures 23, 24, and 25, illustrate several typical operations that can be accomplished using the grinder. Each tool rest should be positioned a little below the center of the grinding wheel and adjusted so the edge of the tool rest is a distance of 1/8" or less from the wheel. This will provide maximum support to the piece that is being ground. This is the most practical and safest position for general work.

As the grinding wheel wears down to a smaller diameter, readjust the tool rest closer to the grinding wheel. Always maintain a distance of 1/8" or less between the grinding wheel and the edge of the tool rest. Free hand grinding without the use of the tool rest should always be done on the lower quarter of the grinding wheel. Read and follow the **"SAFETY RULES"** in the front of this manual and follow them while operating this tool.

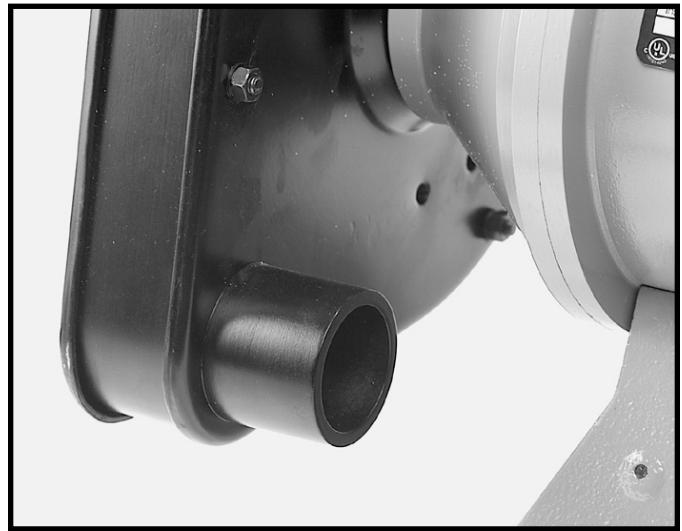


Fig. 22



Fig. 23



Fig. 24

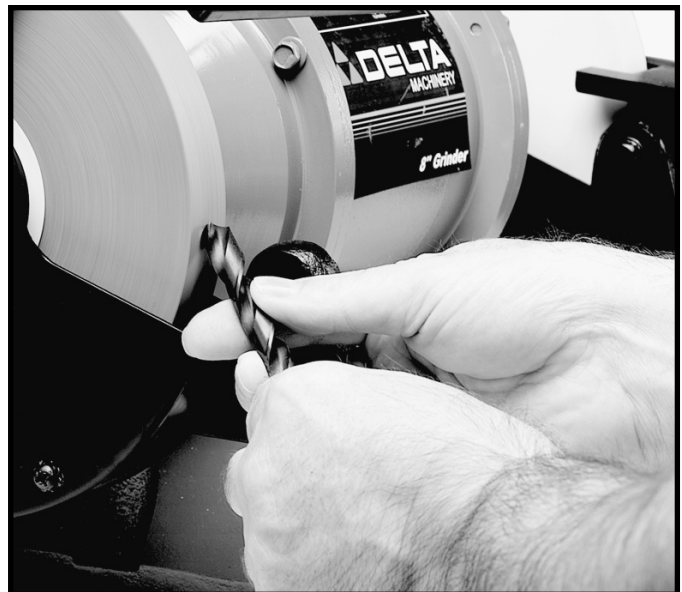


Fig. 25

TROUBLESHOOTING

For assistance with your machine, visit our website at www.deltamachinery.com for a list of service centers or call the DELTA Machinery help line at 1-800-223-7278 (In Canada call 1-800-463-3582).

MAINTENANCE

KEEP MACHINE CLEAN

Periodically blow out all air passages with dry compressed air. All plastic parts should be cleaned with a soft damp cloth. NEVER use solvents to clean plastic parts. They could possibly dissolve or otherwise damage the material.

⚠ WARNING Wear ANSI Z87.1 safety glasses while using compressed air.

FAILURE TO START

Should your machine fail to start, check to make sure the prongs on the cord plug are making good contact in the outlet. Also, check for blown fuses or open circuit breakers in the line.

LUBRICATION

Apply household floor paste wax to the machine table and extension table or other work surface weekly.

PROTECTING CAST IRON FROM RUST

To clean and protect cast iron tables from rust, you will need the following materials: 1 pushblock from a jointer, 1 sheet of medium Scotch-Brite™ Blending Hand Pad, 1 can of WD-40®, 1 can of degreaser, 1 can of TopCote® Aerosol. Apply the WD-40 and polish the table surface with the Scotch-Brite pad using the pushblock as a holddown. Degrease the table, then apply the TopCote® accordingly.

SERVICE



PARTS, SERVICE OR WARRANTY ASSISTANCE

All Delta Machines and accessories are manufactured to high quality standards and are serviced by a network of Porter-Cable • Delta Factory Service Centers and Delta Authorized Service Stations. To obtain additional information regarding your Delta quality product or to obtain parts, service, warranty assistance, or the location of the nearest service outlet, please call 1-800-223-7278 (In Canada call 1-800-463-3582).

ACCESSORIES

A complete line of accessories is available from your Delta Supplier, Porter-Cable • Delta Factory Service Centers, and Delta Authorized Service Stations. Please visit our Web Site www.deltamachinery.com for a catalog or for the name of your nearest supplier.

⚠ WARNING Since accessories other than those offered by Delta have not been tested with this product, use of such accessories could be hazardous. For safest operation, only Delta recommended accessories should be used with this product.

WARRANTY



Two Year Limited New Product Warranty

Delta will repair or replace, at its expense and at its option, any new Delta machine, machine part, or machine accessory which in normal use has proven to be defective in workmanship or material, provided that the customer returns the product prepaid to a Delta factory service center or authorized service station with proof of purchase of the product within two years and provides Delta with reasonable opportunity to verify the alleged defect by inspection. For all refurbished Delta product, the warranty period is 180 days. Delta may require that electric motors be returned prepaid to a motor manufacturer's authorized station for inspection and repair or replacement. Delta will not be responsible for any asserted defect which has resulted from normal wear, misuse, abuse or repair or alteration made or specifically authorized by anyone other than an authorized Delta service facility or representative. Under no circumstances will Delta be liable for incidental or consequential damages resulting from defective products. This warranty is Delta's sole warranty and sets forth the customer's exclusive remedy, with respect to defective products; all other warranties, express or implied, whether of merchantability, fitness for purpose, or otherwise, are expressly disclaimed by Delta.

NOTES

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NOTES

PORTER-CABLE • DELTA SERVICE CENTERS (CENTROS DE SERVICIO DE PORTER-CABLE • DELTA)

Parts and Repair Service for Porter-Cable • Delta Machinery are Available at These Locations
(Obtenga Refacción de Partes o Servicio para su Herramienta en los Sigüientes Centros de Porter-Cable • Delta)

ARIZONA

Phoenix 85013-2906
4501 N. 7th Ave.
Phone: (602) 279-6414
Fax: (602) 279-5470

CALIFORNIA

Ontario 91761 (Los Angeles)
3949A East Guasti Road
Phone: (909) 390-5555
Fax: (909) 390-5554

San Diego 92111
7290 Clairemont Mesa Blvd.
Phone: (858) 279-2011
Fax: (858) 279-0362

San Leandro 94577 (Oakland)
3039 Teagarden Street
Phone: (510) 357-9762
Fax: (510) 357-7939

COLORADO

Denver 80223
700 West Mississippi Ave.
Phone: (303) 922-8325
Fax: (303) 922-0245

FLORIDA

Davie 33314 (Miami)
4343 South State Rd. 7 (441)
Unit #107
Phone: (954) 321-6635
Fax: (954) 321-6638

Tampa 33634
4909 West Waters Ave.
Phone: (813) 884-0434
Fax: (813) 888-5997

GEORGIA

Forest Park 30297 (Atlanta)
5442 Frontage Road,
Suite 112
Phone: (404) 608-0006
Fax: (404) 608-1123

ILLINOIS

Addison 60101 (Chicago)
400 South Rohlwing Rd.
Phone: (630) 424-8805
Fax: (630) 424-8895

KANSAS

Overland Park 66214
9201 Quivira Road
Phone: (913) 495-4330
Fax: (913) 495-4378

MARYLAND

Elkridge 21075 (Baltimore)
7397-102 Washington Blvd.
Phone: (410) 799-9394
Fax: (410) 799-9398

MASSACHUSETTS

Franklin 02038 (Boston)
Franklin Industrial Park
101E Constitution Blvd.
Phone: (508) 520-8802
Fax: (508) 528-8089

MICHIGAN

Madison Heights 48071 (Detroit)
30475 Stephenson Highway
Phone: (248) 597-5000
Fax: (248) 597-5004

MINNESOTA

Eden Prairie 55344
9709 Valley View Road
Phone: (952) 884-9191
Fax: (952) 884-3750

MISSOURI

St. Louis 63146
11477 Page Service Drive
Phone: (314) 997-9100
Fax: (314) 997-9183

NEW YORK

Flushing 11365-1595 (N.Y.C.)
175-25 Horace Harding Expwy.
Phone: (718) 225-2040
Fax: (718) 423-9619

NORTH CAROLINA

Charlotte 28270
9129 Monroe Road, Suite 115
Phone: (704) 841-1176
Fax: (704) 708-4625

OHIO

Columbus 43229
1948 Schrock Road
Phone: (614) 895-3112
Fax: (614) 895-3187

Parma Heights OH 44130
6485 Pearl Road
Phone: (440) 842-9100
Fax: (440) 884-3430

OREGON

Portland 97230
14811 North East Airport Way
Phone: (503) 255-6556
Fax: (503) 255-6543

PENNSYLVANIA

Willow Grove 19090
(Philadelphia)
520 North York Road
Phone: (215) 658-1430
Fax: (215) 658-1433

TEXAS

Carrollton 75006 (Dallas)
1300 Interstate 35 N, Suite 112
Phone: (972) 446-2996
Fax: (972) 446-8157

Houston 77022-2122
536 East Tidwell Rd.
Phone: (713) 692-7111
Fax: (713) 692-1107

WASHINGTON

Auburn 98001 (Seattle)
3320 West Valley HWY, North
Building D, Suite 111
Phone: (253) 333-8353
Fax: (253) 333-9613

Authorized Service Stations are located in many large cities. Telephone **800-438-2486** or **731-541-6042** for assistance locating one. Parts and accessories for Porter-Cable-Delta products should be obtained by contacting any Porter-Cable-Delta Distributor, Authorized Service Center, or Porter-Cable-Delta Factory Service Center. If you do not have access to any of these, call **800-223-7278** and you will be directed to the nearest Porter-Cable-Delta Factory Service Center. Las Estaciones de Servicio Autorizadas están ubicadas en muchas grandes ciudades. Llame al **800-438-2486** ó al **731-541-6042** para obtener asistencia a fin de localizar una. Las piezas y los accesorios para los productos Porter-Cable-Delta deben obtenerse poniéndose en contacto con cualquier distribuidor Porter-Cable-Delta, Centro de Servicio Autorizado o Centro de Servicio de Fábrica Porter-Cable-Delta. Si no tiene acceso a ninguna de estas opciones, llame al **800-223-7278** y le dirigirán al Centro de Servicio de Fábrica Porter-Cable-Delta más cercano.

CANADIAN PORTER-CABLE • DELTA SERVICE CENTERS

ALBERTA

Bay 6, 2520-23rd St. N.E.
Calgary, Alberta
T2E 8L2
Phone: (403) 735-6166
Fax: (403) 735-6144

BRITISH COLUMBIA

8520 Baxter Place
Burnaby, B.C.
V5A 4T8
Phone: (604) 420-0102
Fax: (604) 420-3522

MANITOBA

1699 Dublin Avenue
Winnipeg, Manitoba
R3H 0H2
Phone: (204) 633-9259
Fax: (204) 632-1976

ONTARIO

505 Southgate Drive
Guelph, Ontario
N1H 6M7
Phone: (519) 767-4132
Fax: (519) 767-4131

QUÉBEC

1515 ave.
St-Jean Baptiste, Suite 160
Québec, Québec
G2E 5E2
Phone: (418) 877-7112
Fax: (418) 877-7123

1447, Begin
St-Laurent, (Montréal),
Québec
H4R 1V8
Phone: (514) 336-8772
Fax: (514) 336-3505

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